United States
Environmental Protection
Agency

Great Lakes National Program Office
77 West Jackson Boulevard
Chicago, Illinois 60604

February 1997

Lake Michigan Fact Sheet

# GENERAL LAKE MICHIGAN INFORMATION

From the wave-washed beaches of the northern shore to the bustling urban-industrial communities at the southern rim, Lake Michigan represents an ecologically, culturally, and economically diverse system unparalleled in the Midwest.

Lake Michigan, by volume, is the second largest Great Lake and the only one located totally within the United States. The northern part is in the colder, less developed upper Great Lakes region. It is sparsely populated, except for the Fox River Valley, and is primarily covered with mixed wood forests. The more temperate southern basin of Lake Michigan is the most urbanized area in the Great Lakes system; it contains the Milwaukee and Chicago metropolitan areas. Southern soils are typically fertile and amenable to agriculture.

**What is the Lake Michigan Basin?**

The Lake Michigan basin is the area of land where rivers and streams all drain into Lake Michigan. The Lake's drainage basin covers more than 45,000 square miles and drains parts of four states: Wisconsin, Illinois, Indiana, and Michigan.

Lake Michigan discharges into Lake Huron through the Straits of Mackinac at a rate that allows for a complete change of water about every 100 years. The Lake forms a link in a waterway system that reaches east to the Atlantic Ocean and south through the Mississippi River to the Gulf of Mexico. Among the large rivers that enter the Lake are the Fox and the Menominee in northeast Wisconsin, the St. Joseph, the Kalamazoo, and the Grand in southwest Michigan.

**Size Statistics**

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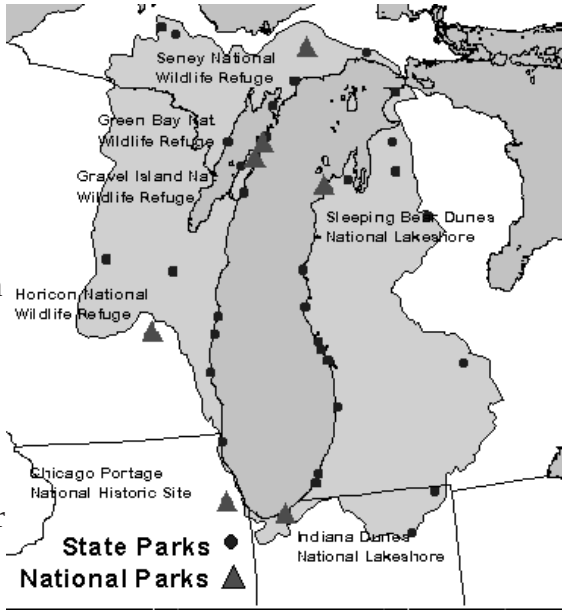
| Length: | 307 miles |
| Width: | 118 miles |
| Depth: | 925 feet maximum depth |
| | 279 feet average depth |
| Shoreline: | 1,660 miles largely of sand & pebble beaches |

**Resources of the Lake Michigan Basin**

Lake Michigan has unique conditions that support a wealth of biological diversity, including many plant and animal species found nowhere else in the world. Lake Michigan basin's sand dunes, coastal marshes, tallgrass prairies, savannas, forests, and fens all provide essential habitats for this diversity of life. Agricultural and industrial products such as iron ore, coal, limestone, metals, petroleum, coke, and chemicals are derived from the basin's resources. The water of Lake Michigan serves many purposes. It supports large commercial and sport fishing industries. It provides industrial process and cooling water, and water for agricultural irrigation. Fleets of freighters pass over the Lake carrying bulk commerce items. Lake Michigan serves as a source of drinking water, as a place for swimming and fishing, as a scenic wonderland, and as a sink for municipal and industrial waste and runoff from the surrounding lands.

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|---|---|
| **Basin Land Use**: | Agricultural, 44%; Residential, 9%; Forest, 41%; Other, 6%. |
| **Shoreline Use**: | Agricultural, 20%; Residential, 39%; Recreational, 24%; Commercial, 5%; Other, 5%. |

**Managing the Lake Michigan Basin**

While parts of the Lake Michigan ecosystem (the interacting complex of living organisms and their non-living environment) have been changed to better suit the needs of humans, the unexpected consequences of many of the changes have only recently become apparent. People have begun to realize that changes to one part of an ecosystem impact the health of the entire system. In order to improve environmental quality, all aspects of an ecosystem need to be addressed. Managing the Lake Michigan basin as an ecosystem is an approach that takes a broad systemic view of the interaction among physical, chemical, and biological components in the basin. It is a geographically comprehensive approach, covering the entire system including land, air, and water. New emphasis on the importance of atmospheric inputs of pollutants and the effects of land uses on water quality are evidence of the broad scope of management planning required in an ecosystem approach. An ecosystem approach to managing the basin includes humans as a major factor in the well-being of the system. This suggests recognition of social, economic, technical, and political variables that affect how humans use natural resources. Human culture, changing lifestyles, and attitudes must be considered in an ecosystem approach because of their effects on the integrity of the ecosystem.

Use of the Lake Michigan basin's resources has brought wealth and well-being to its residents, but the full price of the concentration of industry and people is only now being understood. The overall health of the Lake Michigan ecosystem has been degraded by human activities, and continues to be diminished. Fortunately, many people around the basin recognize the importance of restoring and protecting this resource, and are working together to formulate creative solutions to preserve intact ecosystems, restore damaged ecosystems, and repair highly disturbed areas.

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